



for . . .

- Hotels
- Apartments
- Schools
- Hospitals
- Offices
- Public Buildings

*Permaslab  
Composite*

**FIRE DOORS  
and FRAMES**

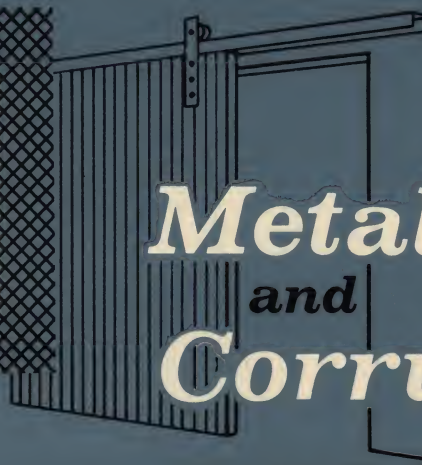


for . . .

- Factories
- Warehouses

*Metal Clad  
and  
Corrugated*

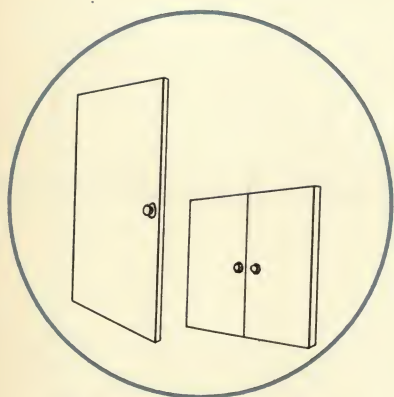
**FIRE DOORS**



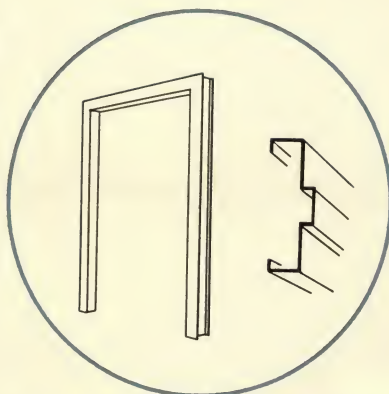


**PRESENTS MORE THAN  
50 YEARS OF  
QUALITY ACHIEVEMENT**

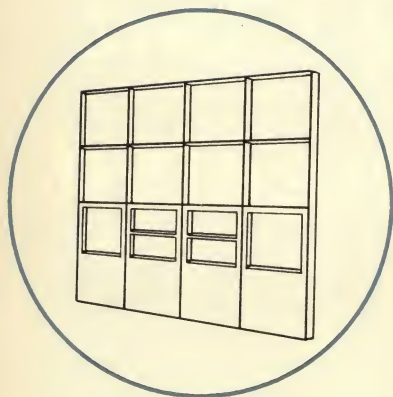
The present day **F. L. Saino Manufacturing Company** has been built on a reputation through the years of quality products, good service and up-to-date engineering. The keynote of the company's policy has always been a willingness to stand behind and insure our products. Not the least of our assets has been our ability to lead the field in any new development. Time and again **SAINO** has been the developer of something new. Always in tune with the modern trends, we have strived to grow and up-date our plant and products. The construction of a new plant and the modernization of our manufacturing facilities only this year points up this desire. We present in this catalog an abbreviated synopsis of some of the products and services that we have to offer. However, our facilities and capacity are greater than can be put down in a brochure and we solicit your inquiries concerning your needs.



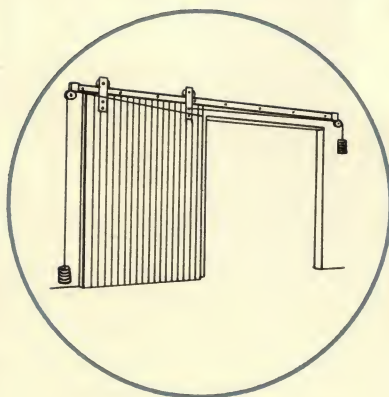
**permaslab doors — pages 2-5**



**frames • hardware — pages 8-9**



**special construction  
pages 6-7**



**metal clad and corrugated doors  
pages 10-12**

## ***Permaslab Composite***

- **economical**
- **designed for lifetime use**
- **modern flush seamless design**
- **maximum fire protection at all times**

**1** 22 gauge zinc coated stretcher level steel is bonded to the core under pressure that assures a perfectly flat, smooth surface.

**2** Core is assembled in 18 gauge steel channel frame that surrounds entire perimeter of the door. It is welded at the corners to give durable, rigid assembly.

**3** Steel lock housing built into core of door and welded to channel framing.

**4** Principal construction feature of the **Permaslab Door** is its core of hydrous calcium silicate with asbestos binder . . . a material that possesses remarkable insulating properties. Great strength by weight—completely incombustible. Modulus of rupture: 175 lb. per sq. in. Modulus of elasticity: 160,000 lb. per sq. in. Compressive strength: 500 lb. per sq. in. Nominal density: 20 lb. per cu. ft.

**5** The steel hinge reinforcing is welded to the inner channel framing.

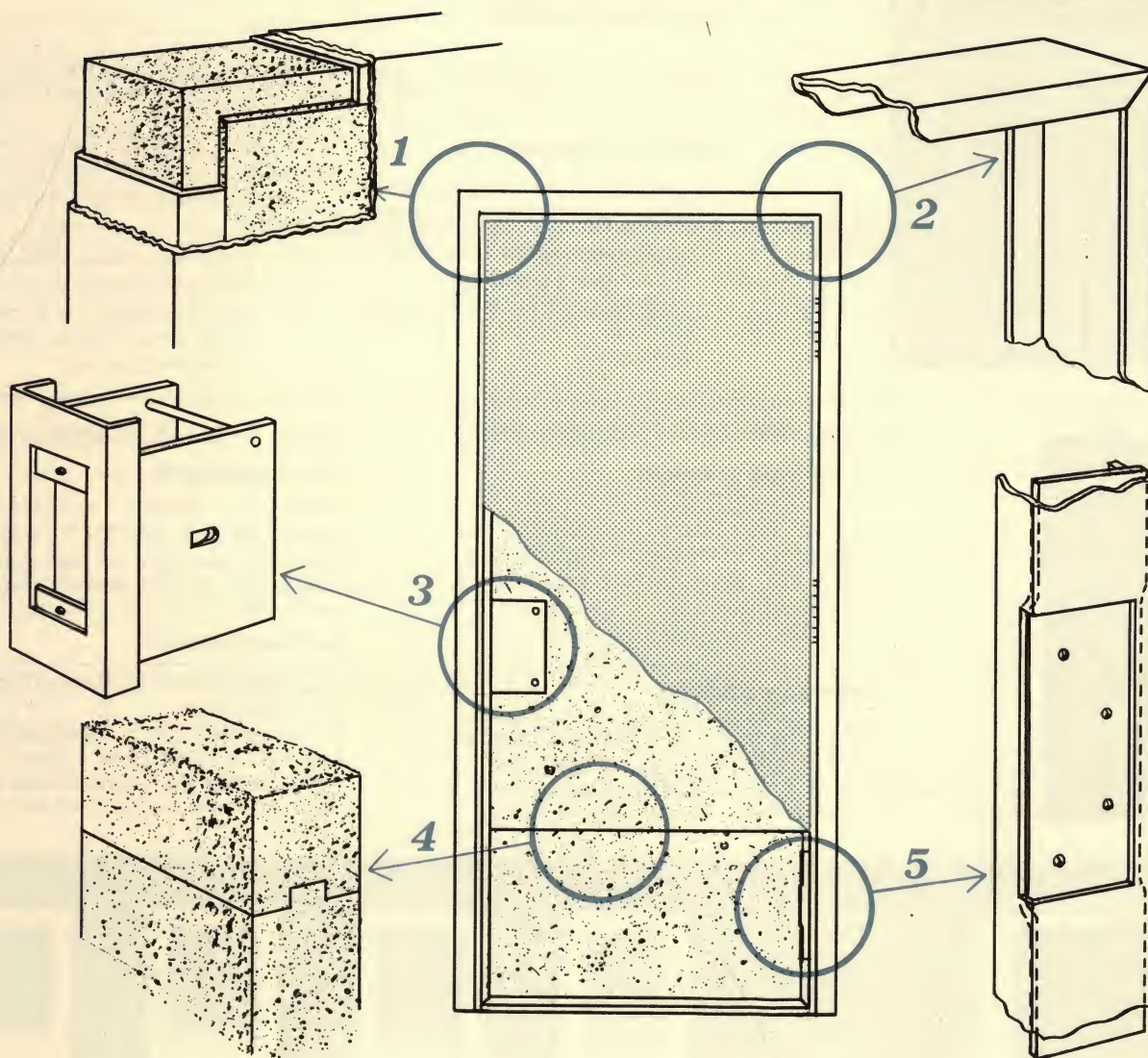


### CONSTRUCTION

truly a "years-ahead" fire door design • 3-hours (A) Underwriters' label  
... with SINGLE POINT LATCH or LOCK

The Permaslab Composite Fire Door offers features never before found in competitive products. It is inherently fireproof and its simple, rugged construction

offers complete protection from warp, twist, shrinkage or expansion, rattle and faults found in alternate products.



**great strength**—The unique assembly combination of solid structural mineral core, zinc coated and bonderized steel covering and all welded construction, gives the **Permaslab Door** exceptional structural resistance to impact, transverse and corner loads.

**sound reduction**—The **Permaslab Door** offers exceptional sound reduction with a rating of 32 to 34 decibels at average frequencies of 1 to 2000.



# Permaslab Composite FIRE DOORS

MAXIMUM FIRE AND LIFE PROTECTION . . . with SINGLE POINT LATCH or LOCK!

3-Hour (A) Underwriters' Label



In applications that require maximum protection of life and property the SAINO Permaslab Composite Class A Door leads the field. The combination of modern functional design, beauty, long life and sure fire stopping ability makes the Permaslab Door right for the job.



## type PA-10 • pair swing with single point latch

3-hour (A) Underwriters' labeled for opening not exceeding 7'0" wide x 7'6" high. Complete unit must include doors, frame and hardware.

### hardware schedule

(1 Leaf active, 1 Leaf inactive)

- 3 Pairs BB 4½" Template Butts.
- 1 Cylinder Lock or Latch Set.
- 1 Fuse Arm Door Closer.
- 1 Set Manual Throw Flush Bolts.
- 1 Astragal.

NOTE: If BOTH leaves are to be active and stand in open position, the following hardware must be added:

- 1 Fuse Arm Door Closer.
- 1 Co-ordinating device.
- 1 Set AUTOMATIC throw Flush Bolts. (Used instead of manual throw.)



## type SA-10 • single swing with single point latch

3-hour (A) labeled for opening not exceeding 3'6" wide x 7'6" high. Complete unit must include door, frame and hardware.

### hardware schedule

- 1½ pairs BB 4½" Template Butts.
- 1 Cylinder Lock or Latch Set.
- 1 Fuse Arm Door Closer.

## type A-10 • single swing with 3 point latch

3-hour (A) labeled for opening not exceeding 4'0" wide x 8'0" high. Not available in pairs swing. Complete unit must include door, frame and hardware.

### hardware schedule

- 1½ pairs BB 4½" Heavy Template Butts.
- 1 3-point Latch Assembly\*.
- 1 Fuse Arm Door Closer.

\*Where cylinder lock is required, door is available with Mortise Cylinder Dead Bolt.



### standard designs

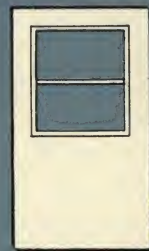
Type 2400  
—Single Swing  
Type 2401  
—Pairs Swing



S-2 single  
P-2 pairs



S-3 single  
P-3 pairs



S-4 single  
P-4 pairs



S-5 single  
P-5 pairs







# Permaslab

## FIRE DOORS

16b  
Sa

### COMMERCIAL APPLICATIONS...

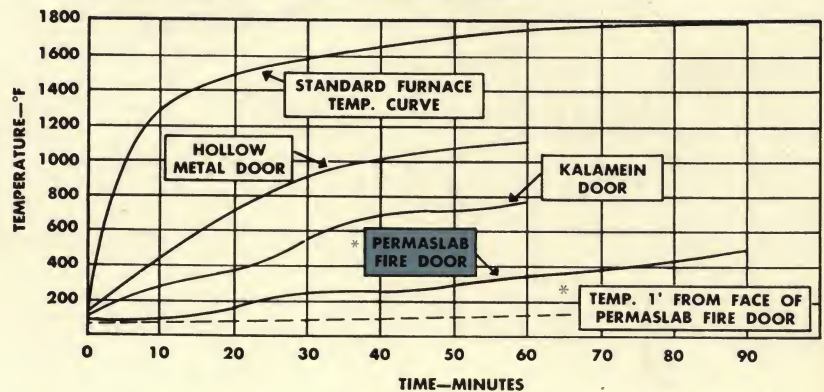
The Permaslab Door offers a great combination of advantages for use either as an Underwriters' labeled fire door, or non-labeled, on any opening . . . in any type building where an attractive, yet durable and substantial door is desired.

With its core of structural insulation, plus unusual assembly, the Permaslab Fire Door offers a combination of advantages not available in any other door construction: low heat transmission—great strength—lower maintenance cost.

### low heat transmission

A good fire door must not only be a barrier to fire, but be so constructed that heat transmission through the door be low so as to prevent loss of life. Recent casualties in hotel and institutional fires have stressed the importance of using fire doors that offer the very lowest possible transmission of heat. That this has been accomplished by the Permaslab Door is shown in the chart at right. (Taken from fire test report Underwriters' Laboratories, Inc.; others from U.S. Senate hearings on safety at sea)

COMPARATIVE HEAT TRANSMISSION CHART



### Underwriters' Labeled

(Also Factory Mutual Approved)

The SAINO "PERMASLAB" Composite Fire Door has been assigned the highest Label Classification of the Underwriters' Laboratories as follows:

time	temperature rise 30 minutes
3-hour (A)	250° F maximum
1½-hour (B)	250° F maximum
¾-hour (C)	
1½-hour (D)	250° F maximum
¾-hour (E)	

### UNDERWRITERS' SIZE LIMITS (in inches)

time	3-hour (A)	1½-hour (B)	¾-hour (C)	1½-hour (D)	¾-hour (E)
	250° firewall or division wall	250° vertical shaft	corridor or room partition	250° exterior wall severe exposure	exterior wall
<b>SINGLE SWING</b>					
Single Point Lock	42 x 90	48 x 96	48 x 96	48 x 96	48 x 96
3 Point Latch	48 x 96				
<b>PAIRS SWING</b>					
Single Point Lock	84 x 90	90 x 90	90 x 90	90 x 90	90 x 90
<b>GLASS SIZE</b>	none	10 x 10*	1296 sq. in.**	none	720 sq. in.***

\* 100 sq. in. maximum area exposed wire glass per opening. Neither dimension exceeding 12". (Pair Doors can have 50 sq. in. per leaf.)

\*\* One or more wire glass lights. Exposed area each light not exceeding 1296 sq. in. with no dimensions exceeding 54".

\*\*\* One or more wire glass lights. Exposed area each light not exceeding 720 sq. in. with no dimensions exceeding 54".



S-7 single  
P-7 pairs



S-8 single  
P-8 pairs



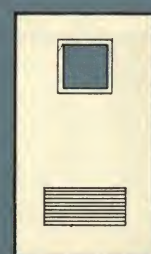
S-10 single  
P-10 pairs



S-14 single  
P-14 pairs



S-17 single  
P-17 pairs



S-19 single  
P-19 pairs

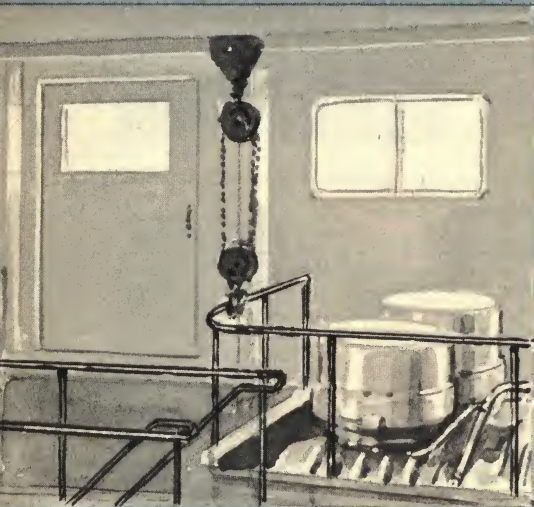




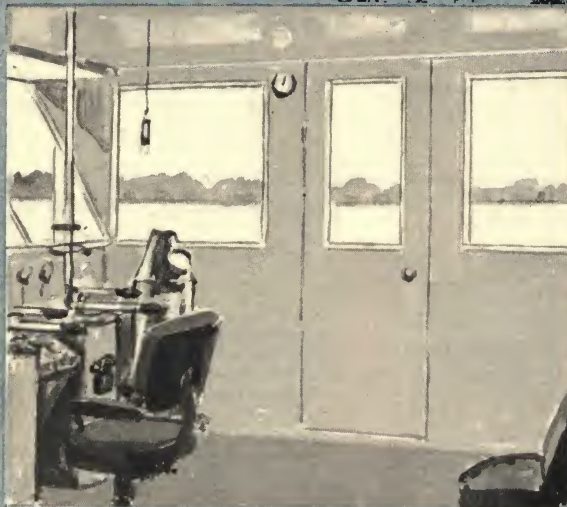
# CUSTOM FRAME & DOOR COMBINATIONS

## institutional....

Composite doors and pressed steel entrance frames for churches, hospitals, schools and institutions.



Engine room



Pilot house

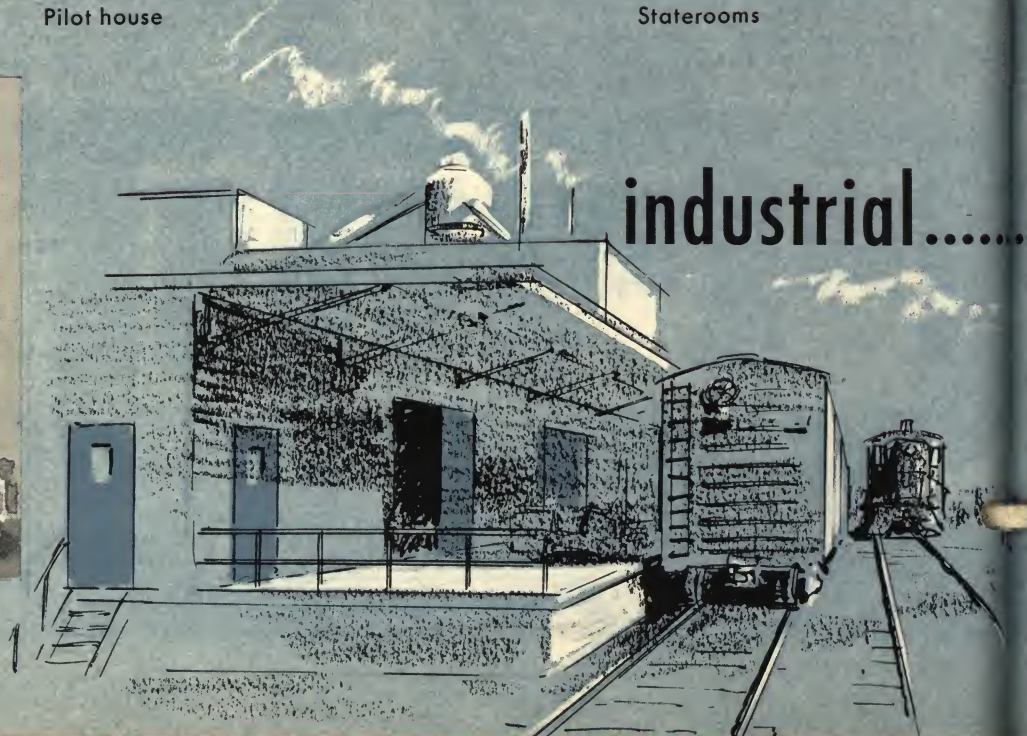


Staterooms



Loading Dock

## industrial.....







Entrance doors and frames

The F. L. Saino Manufacturing Company does not restrict itself to the production of Underwriters' labeled products. A background of over 50 years of experience in the manufacture of swinging and sliding doors and pressed metal products gives SAINO the capability to design for a variety of markets. The illustrations on these pages gives an indication of this diversity.

## marine....

Moistureproof and fireproof composite doors, galvanized frames and hardware for a variety of maritime applications.



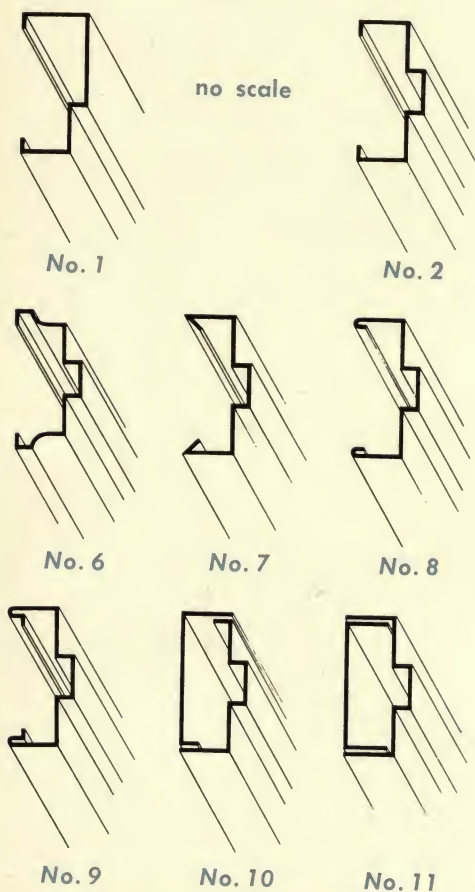
Flush metal fireproof warehouse doors with modern enclosed track and hardware for warehouses and manufacturing plants.



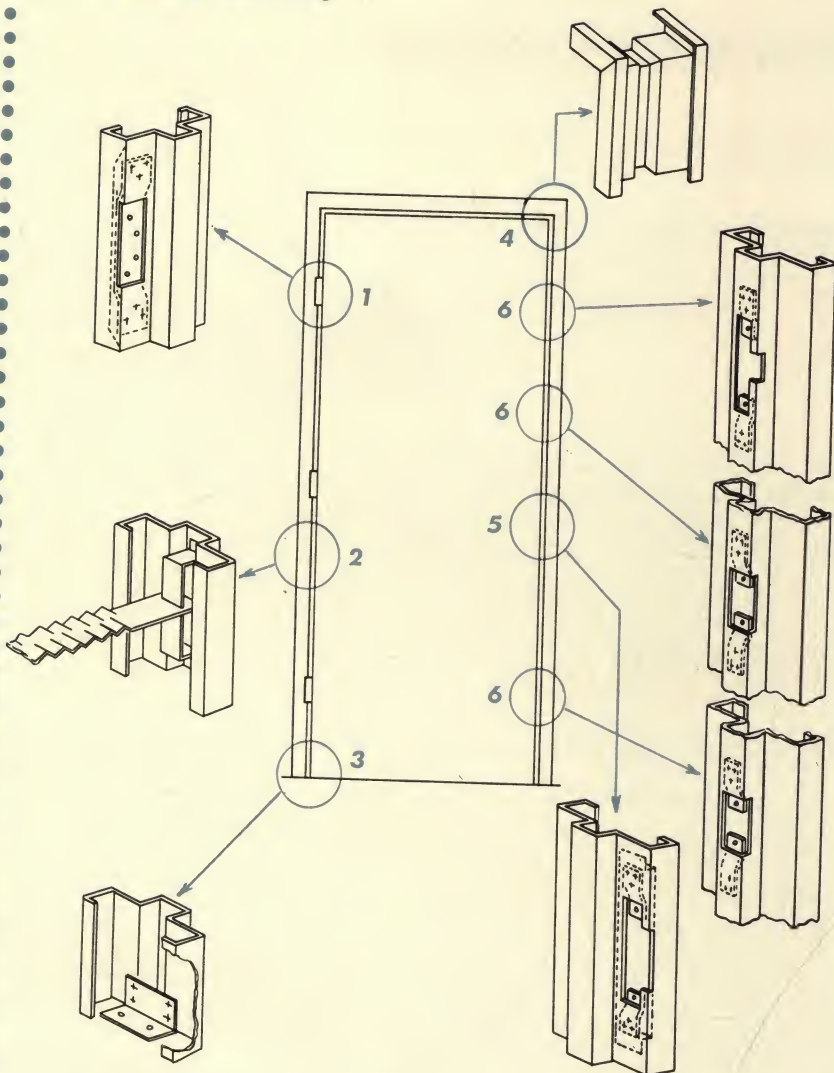
# FRAMES AND HARDWARE • specifications

## pressed steel frames

The frame profiles shown below are some of the more popular types. The profiles and the returns shown are only a small sample of the many variations possible with pressed steel. SAINO is able to offer a wide variety of gauges (16, 14 and 12), materials (cold rolled steel, hot rolled steel, paint bond steel, stainless steel), and designs. We solicit inquiries concerning your pressed steel requirements.



## frame details



- |                                       |   |
|---------------------------------------|---|
| 1 Hinge Reinforcing                   | 4 Mitered and Welded Corner                               |
| 2 Adjustable Masonry Anchor (labeled) | 5 Strike Mortise and Reinforcing                          |
| 3 Floor clip                          | 6 3-Point Strike Mortise and Reinforcing (Type A-10 only) |

## SPECIFICATIONS

### frames

Frames to be of \_\_\_\_\_ gauge (16, 14 or 12) cold rolled steel as manufactured by **The F. L. Saino Manufacturing Company**.

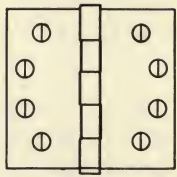
Frame section to be SAINO type \_\_\_\_\_ (type 2, 5½" jamb depth is standard). Frames to be SAINO standard welded construction. Corners of frames mitered, welded and ground smooth. Clip angles spot welded to bottom of each jamb for anchoring to floor. Frames mortised and reinforced for hardware. Cutouts covered with mortar guards welded to frame. Frames to be cleaned and phosphatized by the Phosteen process. Frames to be given a shop coat of red primer paint, air dried.

### hardware

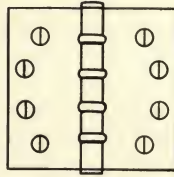
Furnish hardware as called for in schedule except as noted for doors that are to have 3-hour (A) Underwriters' label.

For 3-hour (A) Underwriters' labeled doors the hardware is to be supplied by **The F. L. Saino Manufacturing Company** as required by the Underwriters' Laboratories and in accordance with their specifications.



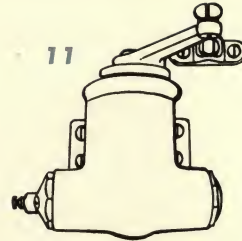
**hardware**


1



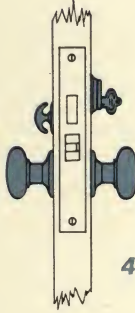
2

11

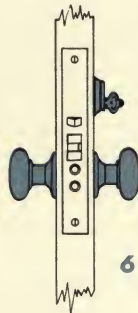


3

5

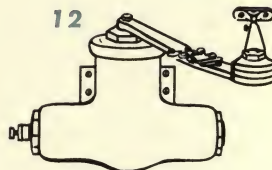


4

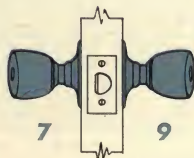


6

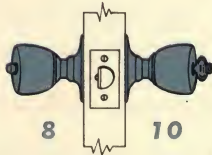
12



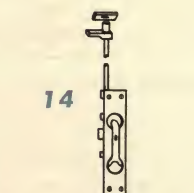
15



7



8



10

14

- 1 No. 179P Butts (BB179P, 2 ball bearings)
- 2 No. BB168P Butts
- 3 No. 2025 Mortise Latchset
- 4 No. 2024 Mortise Lockset
- 5 No. 23025 Mortise Latchset, 3/4 inch throw
- 6 No. 23056 Mortise Lockset, 3/4 inch throw
- 7 No. 410 Cylindrical Latchset
- 8 No. 440 Cylindrical Lockset
- 9 No. 410 3/4 Cylindrical Latchset
- 10 No. 440 3/4 Cylindrical Lockset
- 11 Size D Closer
- 12 Size D1F2 Fuse Arm Closer
- 13 No. 2900 Coordinating Device
- 14 No. 194 Flush Top and Bottom Bolt
- 15 No. A-10 3-Point Surface Applied Latch

**doors**

To be Permaslab flush design 1 3/4 inch thick as manufactured by The F. L. Saino Manufacturing Company, Memphis, Tennessee. Core to be hydrous calcium silicate block insulation, tongue and grooved. Core to be surrounded by an 18 gauge rolled steel channel, mitered and welded at corners. Face sheets to be 22 gauge zinc coated and bonderized steel bonded to core with resorcinal waterproof adhesive. Face sheets to be welded to channel around entire perimeter of door edge. Exposed edges of door to be filled with metal filler. Door to be given a shop coat of green primer paint, air dried. Door to be reinforced with heavy gauge steel reinforcing plates for both mortise and surface applied hardware.

**PACKAGE UNITS**

The Permaslab Door is available as a package unit which consists of door, frame and hardware. The most popular sizes and types will be carried in stock. The use of the package unit will not only represent a savings in initial cost, but will assure quicker delivery because of the elimination of delays so common when hardware is supplied by others.

**types**—package unit doors can be supplied in any standard type as shown on pages 4 and 5. We however recommend types 2400 and S-2 in single swing and types 2401 and P-2 in pairs swing for quicker delivery.

**sizes**—available in any standard or intermediate size desired.

**frame**—the type 2 with 5 1/2 inch jamb width is recommended for quicker delivery. However other types as shown on page 8 can be supplied.

**Underwriters' label**—package unit doors are available with 1 1/2-hour (B), 3/4-hour (C), 1 1/2-hour (D) and 3/4-hour (E) labels within the limitations as given on page 5.

**hardware**—items as shown below and to the left are carried in stock and are particularly adapted for use with the Permaslab stock door.

**hardware**
**SINGLE SWING**

1 1/2 Prs. 179P Template Butts\*

1 440 or 2024 Lockset or 410 or 2025 Latchset

1 Size D Door Closer\*\*

**PAIRS SWING**

3 Prs. 179P Template Butts\*

1 440 or 2024 Lockset or 410 or 2025 Latchset

1 Set 194 Flush Top and Bottom Bolts

1 Astragal

1 Size D Door Closer\*\*

\*BB-179P Hinges can be substituted

\*\*Door Closer may be omitted if desired



# METAL FIRE DOORS • industrial • warehouse

## SAINO METAL CLAD FIRE DOOR

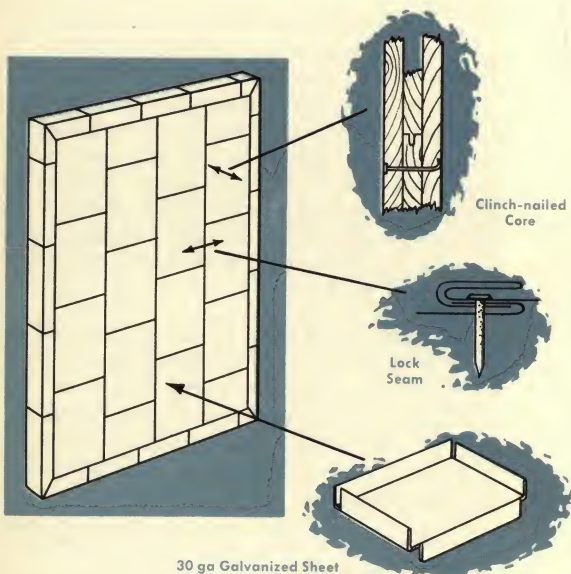
More commonly called Tin-Clad it has proven itself to be a most effective fire stop.

### construction

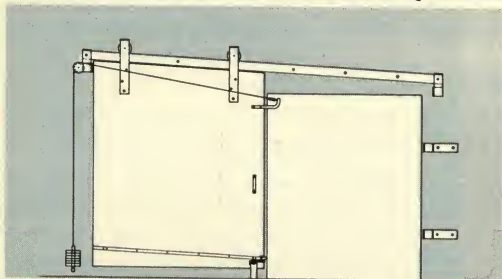
The SAINO Metal Clad Fire Door is available in two thicknesses. The 3-ply door is  $2\frac{1}{2}$ " thick and carries the 3-hour (A) Underwriters' Label, 250 max. The 2-ply door is  $1\frac{3}{4}$ " thick and carries the  $1\frac{1}{2}$ -hour (B) Underwriters' label. The core of the door is made of well seasoned, selected, nonresinous lumber, tongue and grooved at both edges, laid at right angles and clinch nailed together in rows not more than 8" apart. The covering is 30 gauge galvanized sheets applied with all joints between sheets locked with  $\frac{1}{2}$ " seams and nailed under the seams. All in exact accordance with Underwriters' Laboratories requirements.

### specifications

All openings as indicated shall be covered with Type No. \_\_\_\_ SAINO Metal Clad Fire Door as made by The F. L. Saino Manufacturing Company, Memphis, Tennessee. The doors shall be made in strict accordance with the specifications of the Underwriters' Laboratories and covered with No. 30 gauge galvanized sheets. The door shall bear the Class \_\_\_\_ Label of the Underwriters' Laboratories and shall also be Factory Mutual Approved. They shall be supplied complete with hardware.



## SINGLE GRAVITY SLIDE (Incline Top)



type 100 • SAINO Metal (Corrugated Steel)

type 700 • 3-ply Metal Clad

type 1700 • 2-ply Metal Clad

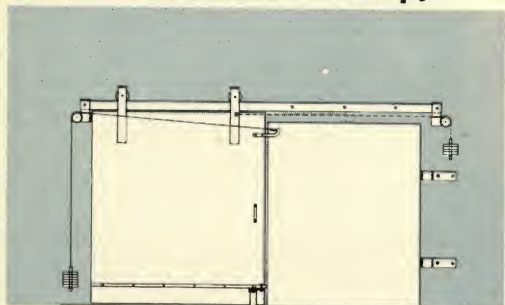
Simple in operation and easy to install, the Single Gravity Slide is recommended in all cases where there is sufficient headroom.

**sideroom required:** closing side, 14"; opening side, width of opening plus 19".

**headroom required:** 14" plus  $1\frac{1}{2}$ " for each foot of opening width.

**Underwriters' labeled:** types 100 & 700—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12' 0". type 1700—for openings not exceeding 80 sq. ft.; width or height not exceeding 10' 0".

## SINGLE SLIDE (Level Top)



type 102 • SAINO Metal (Corrugated Steel)

type 702 • 3-ply Metal Clad

type 1702 • 2-ply Metal Clad

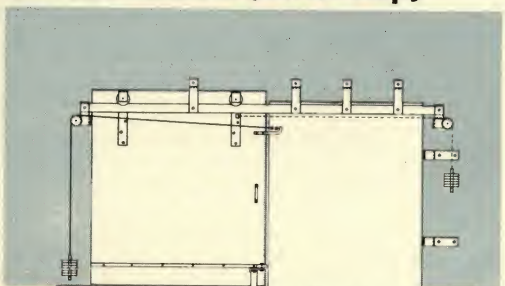
Recommended where there is insufficient headroom clearance to take care of the Gravity Slide Incline Top Door. Two sets of weights are used. Back weight is held in position by a Fusible Link. The approach of fire releases the weight permitting the front weight to pull the doors shut.

**headroom required:** 14"

**sideroom required:** closing side, 19"; opening side, width of opening plus 19".

**Underwriters' labeled:** type 102 & 702—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12' 0". type 1702—for openings not exceeding 80 sq. ft.; width or height not exceeding 10' 0".

## SINGLE SLIDE (Level Top)



type 103 • SAINO Metal (Corrugated Steel)

type 703 • 3-ply Metal Clad

type 1703 • 2-ply Metal Clad

Generally called "Drop Bracket" this type is designed for use on openings where the headroom is limited. Its principal of operation is the same as for the type 102, 702 or 1702.

**headroom required:** 8".

**sideroom required:** closing side, 19"; opening side, width of opening plus 19".

**Underwriters' labeled:** types 103 and 703—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12' 0". type 1703—for openings not exceeding 80 sq. ft.; width or height not exceeding 10' 0".





metal-clad &  
corrugated

**FIRE DOORS**

16b  
Sa

## SAINO METAL (Corrugated Steel) FIRE DOOR

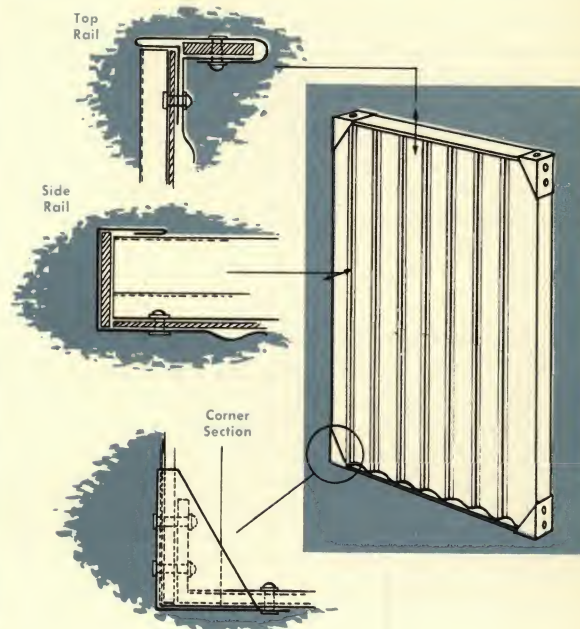
Has many advantages over other types of Fire Doors because of its permanent construction and ability to withstand severe fire exposure. Being light in weight it is easy to install and made entirely of steel, it will last a lifetime.

### construction

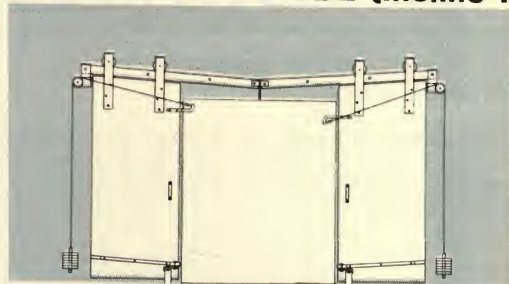
The **SAINO Metal (Corrugated Steel) Fire Door** is made of two thicknesses of 22 gauge  $2\frac{1}{2}$ " corrugated galvanized steel with sheet asbestos lining. The vertical corrugations are on the exposed side while the horizontal corrugations are on the unexposed or wall side. The sheets are assembled in a substantial frame which, together with our exclusive assembly features provide for proper expansion and contraction along straight lines which is very essential when the door is exposed to fire. Doors are  $2\frac{1}{2}$ " thick and weigh 5 lbs./sq. ft., without hardware. 3-hour (A) Underwriters' label and Factory Mutual Approved.

### specifications

All openings as indicated shall be covered with Type No. \_\_\_\_\_ **SAINO Metal (Corrugated Steel) Fire Doors** as manufactured by **The F. L. Saino Manufacturing Company, Memphis, Tenn.** The doors shall be made of two thickness 22 gauge galvanized corrugated sheets with asbestos lining. The doors shall carry the 3-hour (A) label of the Underwriters' Laboratories and shall also be Factory Mutual Approved. They shall be supplied complete with hardware.



## PAIR GRAVITY SLIDE (Incline Top)



- type 101 • **SAINO Metal (Corrugated Steel)**
- type 701 • **3-ply Metal Clad**
- type 1701 • **2-ply Metal Clad (NOT labeled)**

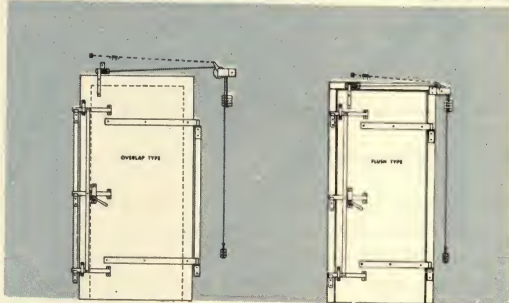
Recommended only where there is not enough clearance on either side to permit use of the Single Slide Type. Can also be supplied with notch at center top for overhead conveyor track, however such doors cannot be Underwriters' labeled.

**sideroom required:** On each side—one half width of opening plus 15".

**headroom required:** As the track is inclined, the headroom clearance will vary according to the opening width.

**Underwriters' labeled:** types 101 and 701—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12' 0".

## SINGLE SWING (Flush or Overlap)



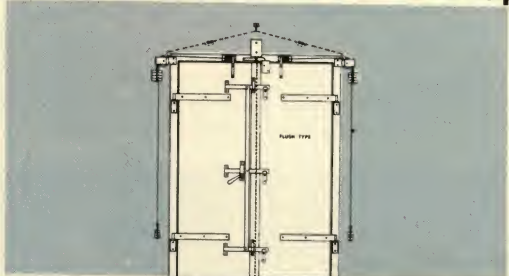
- type 104 • **SAINO Metal (Corrugated Steel)**
- type 704 • **3-Ply Metal Clad**
- type 1704 • **2-Ply Metal Clad**

**overlap type:** made to overlap the masonry opening 4" at each side and at top. No steel frame required.

**flush type:** made to fit into structural steel frame. Underwriters' labeled channel iron frame recommended.

**Underwriters' labeled:** types 104 and 704—for openings not exceeding 6' 0" wide and 12' 0" high. type 1704—for opening not exceeding 6' 0" wide and 10' 0" high.

## PAIRS SWING (Flush or Overlap)



- type 105 • **SAINO Metal (Corrugated Steel)**
- type 705 • **3-Ply Metal Clad**
- type 1705 • **2-Ply Metal Clad**

**overlap type:** Made to overlap the opening 4" at each side and at top. No steel frame required.

**flush type:** Made to fit into structural frame. Underwriters' labeled channel iron frame recommended.

10' 0" wide and 12' 0" high. type 1705—for openings not exceeding 10' 0" wide and 10' 0" high.





## JUNIOR DOORS

corrugated steel • non-labeled

Designed to meet the rugged requirement of use in factories, warehouses and cotton mills, the **SAINO Metal Junior Doors** are positively rigid, immune to weather and wear, thus assuring permanent service and utmost economy in industrial doors. Corrugated galvanized steel construction gives the **SAINO Metal Junior Door** a place of increasing preference in construction.

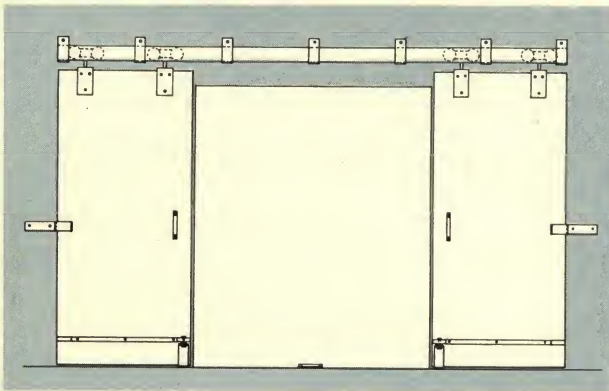
### construction features

The **SAINO Metal Junior Door** is made of two-thickness 22 gauge  $2\frac{1}{2}$ " corrugated galvanized steel assembled on a substantial frame and interlined with sheet asbestos. The vertical corrugation is on the outside while the horizontal corrugation is on the wall side. The door is  $1\frac{1}{2}$ " thick. It weighs approximately 4 lb. per sq. ft. without hardware.

The door is not Underwriters' labeled.

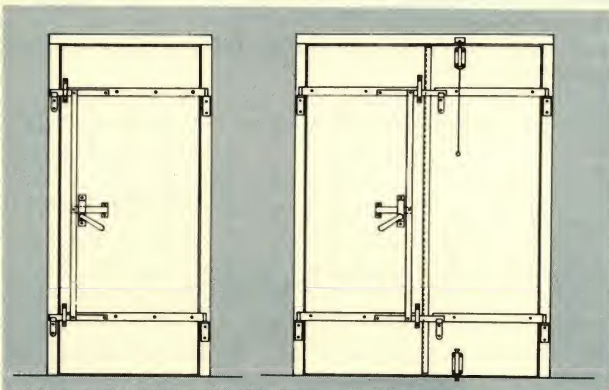
### type 400 • single slide

The type 400 single slide **SAINO Metal Junior Door** is ideal for use on any opening where Underwriters' labeled doors are not necessary yet a durable light weight door is desired. Furnished complete with roller bearing hangers and enclosed track, it is simple to install, easy to operate and will give years of trouble-free service. Generally made to overlap the opening 4" at each side and at top.



### type 401 • pairs slide

Recommended on large openings or where conveyor track passes through opening. Doors can be notched for conveyor track. Generally made to overlap opening 4" at each side and at top.



### type 404 • single swing

Available in flush type as shown with pressed steel or structural steel frame and overlap type. The overlap type is generally made to overlap the opening 4" at each side and at top. Furnished complete with substantial strap hinges and bar latch.

### type 405 • pairs swing

Recommended on large openings or where conveyor track passes through opening. Doors can be notched for conveyor track. Available in flush type as shown with pressed steel or structural steel frame and overlap type.

**The F. L. SAINO MANUFACTURING CO.**

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